CLAIMS

I claim:

1. A method of transmitting data comprising the steps of:

sending a command from a platform command processor to a central bus interface unit;

providing power over a power line from a central power supply to a payload unit; and

interrupting the power to the payload unit to provide the payload unit with the command from the platform command processor.

2. A method of claim 1 further comprising sending telemetry from the payload unit to the platform command processor.

3. A method of claim 2 wherein the telemetry is sent over the power line.

4. A method of claim 1 further comprising the steps of:

providing power over the power line from the central power supply to a second payload unit; and

interrupting the power to the second payload unit to provide the second payload unit with a second command from the platform command processor.

5. A method of communicating with a payload unit comprising the steps of:

providing power to the payload unit over a wire; and

providing telemetry from the payload unit over the wire to a spacecraft platform's telementry and command processor.

6. A method of claim 5 further comprising the steps of providing command data from the spacecraft platform's command processor to the payload unit by interrupting power to the payload unit.

7. A system comprising:

a spacecraft platform;

a central bus interface unit coupled to the platform;

a payload unit coupled to the central bus interface unit; and

a power supply line for powering the payload unit;

wherein the spacecraft platform provides a command to the central bus interface unit;

wherein the central bus interface unit sends the command to the payload unit over the power supply line.

8. A system of claim 7 wherein telemetry data is sent from the payload unit to the central bus interface unit.

9. A system of claim 8 wherein the telemetry data is sent on the power supply line.

10. A system of claim 7 wherein the central bus interface unit interrupts the power on the power supply line to send the payload unit the command received by the central bus interface unit.

11. A system for communication on a spacecraft comprising:

a spacecraft platform telementry and command processor;

a spacecraft bus interface coupled to the spacecraft platform;

a central bus interface unit coupled to the spacecraft bus interface; and

a plurality of payload units coupled to the central bus interface unit;

wherein the central bus interface unit supplies power to the plurality of payload units through a plurality of combined power and communication wires;

wherein the central bus interface unit sends a command received from the spacecraft platform to one of the plurality of payload units through one of the combined power and communication wires.

12. A system of claim 11 wherein the plurality of payload units further comprise a decoder for processing the command sent from the central bus interface unit.

13. A system of claim 11 further comprising a switch for momentarily interrupting the power on the combined power and communication wire.

14. A system of claim 13 wherein the command is sent by the central bus interface unit by opening and closing the switch.

15. A system for connecting a spacecraft bus to a payload unit comprising:

an interface for directing a command from a spacecraft platform command processor;

a central bus interface unit coupled to the interface, the central bus interface unit comprising:

a command decoder; and

a register coupled to the command decoder for operating a switch;

wherein the switch interrupts an output voltage, the interrupts corresponding to the command from the spacecraft platform command processor;

a payload interface coupled to the output voltage, the payload interface comprising:

a decoder coupled to the output voltage for decoding the interruption of the output voltage; and

a power voltage for powering the payload unit during the interruption of the output voltage.

16. A system of claim 15 further comprising a modulator at the end user interface for sending telemetry to the central bus interface unit.

17. A system of claim 16 further comprising a demodulator at the central bus interface unit for receiving the telemetry.

18. A system of claim 17 wherein the telemetry is sent over the same line as the output voltage.

19. A system of claim 17 wherein the telemetry is sent using a spread spectrum signal.